

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Currently Amended) A valve system for use with a variable head of fluid, the valve system comprising:
 - a first diaphragm; ~~and~~
 - a means for transferring a fluid pressure associated with the variable head of a first fluid to the first diaphragm wherein the position of the first diaphragm is controlled by the fluid pressure associated with the variable head of the first fluid; and
 - a cage associated with the means for transferring a fluid pressure, the cage being adapted to prevent a back pressure acting on the means for transferring a fluid pressure.
2. (Original) A valve system as claimed in Claim 1 wherein when the valve system is deployed the first diaphragm is located above the variable head of the first fluid.
3. (Currently Amended) A valve system as claimed in Claim 1, wherein the valve system is connected to a fluid supply line to the variable head of the first fluid such that the first diaphragm moves between an open position, wherein the first fluid is free to flow within the fluid supply line, and a closed position, wherein the first fluid is prevented from flowing within the fluid supply line.

4. (Currently Amended) A valve system as claimed in Claim 1, wherein the first diaphragm comprises a blocking means to assist the first diaphragm ~~move~~ in moving to the closed position.

5. (Previously Presented) A valve system as claimed in Claim 1, wherein the means for transferring a fluid pressure associated with the variable head of the first fluid comprises a compressible second fluid.

6. (Currently Amended) A valve system as claimed in Claim 5, wherein the compressible second fluid is contained within at least one tube ~~or more tubes~~ connected at a first end to the first diaphragm and positioned so that when in use the second end of the at least one ~~or more tubes are~~ tube is located below the surface of the head of variable first fluid.

7. Canceled.

8. (Currently Amended) A valve system as claimed in Claim 6, wherein the at least one tube is connected to the first diaphragm via a diaphragm valve.

9. (Original) A valve system as claimed in Claim 8 wherein the means for transferring a fluid pressure further comprises one or more chambers located between the diaphragm valve and the first diaphragm.

10. (Currently Amended) A valve system as claimed in Claim 9 wherein the first diaphragm comprises an aperture that provides a means for communicating a sample of fluid taken from the supply line to ~~the variable head of the first fluid to~~ the one or more chambers.

11. (Currently Amended) A valve system as claimed in Claim 9, wherein when the diaphragm valve moves to a closed position a pressure build up in the one or more chambers ~~so causing~~ causes the first diaphragm to move from the open position to the closed position.

12. (Previously Presented) A valve system as claimed in Claim 1, wherein the valve system further comprises an adjuster wherein the adjuster provides a means for varying the dependency of the position of the first diaphragm to the fluid pressure associated with the variable head of the first fluid.

13. Canceled.

14. (Currently Amended) A valve system as claimed in Claim 12, wherein the transferring means comprises a diaphragm valve, and wherein the adjuster comprises a means for varying the resistance required to activate the diaphragm valve.

15. (Original) A valve system as claimed in Claim 14 wherein the means for varying the resistance required to activate the diaphragm valve comprises a bias means and an adjustment screw wherein the position of the adjustment screw defines the resistance force applied by the bias means to the diaphragm valve.

16. (Previously Presented) A valve system as claimed in Claim 3, wherein the valve system further comprises an automatic cut off means so that in the event of mechanical failure the first diaphragm is moved to the closed position.

17. (Currently Amended) A valve system as claimed in Claim 16 wherein the automatic cut off means comprises one or more sections of absorbent material such that when the first fluid is incident on the absorbent material expansion occurs so as to cause the first diaphragm to move to the closed position ~~valve to close~~.

18. (Currently Amended) A valve system as claimed in Claim 8, wherein the diaphragm valve comprises a plunger that assists movement of the first diaphragm to the closed position.

19-26. Canceled.

27. (Previously Presented) A valve system as claimed in Claim 5, wherein the compressible second fluid is air.

28. (Previously Presented) A valve system as claimed in Claim [[5]] 1, wherein the means for transferring a fluid pressure associated with the variable head of the first fluid comprises compressible second fluid is water.